

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.-35. (Canceled)

36. (Currently amended) A computer implemented method comprising:

storing, by an operating system that includes a shell and a kernel, the kernel of the operating system including ~~comprises~~ a file system and a database management program, the file system integrated with a database management program, data for one or more applications, wherein the operating system uses the database management program to generate objects for the data and the file system to store the file streams for the objects, the database management program including a base schema that characterizes each object into one or more object types that allows the operating system to understand and interpret the information in the file system, wherein the base schema defines object, property base, and extension types, wherein an object type is defined by properties of a foundational object type, the property base type being an anchor from which other property types are derived and through which derived property types are interrelated, and the extension type defines which object an extension extends and identification to distinguish one extension from another;

receiving, by the operating system, at least one request from said one or more applications for specific data; and

identifying, by the database management program integrated with the file system, a specific object corresponding to the specific data;

retrieving, by the operating system, the specific object corresponding to the specific data for said one or more applications.

37. (Previously presented) The method of claim 36, wherein the schema further defines at least one base object type including at least one base object type property.

38. (Previously presented) The method of claim 37 further comprising:

storing, by the operating system, at least one object in said database management program integrated with the file system, said object being derived from said object type and including said at least one base object type property.

39. (Previously presented) The method of claim 38 further comprising:
storing, by the operating system, said at least one object in said database management program integrated with the file system, wherein said at least one object extends from said base object type.

40. (Previously presented) The method of claim 37, wherein said base object type comprises a property that uniquely identifies said object to said database management program integrated with the file system.

41. (Previously presented) The method of claim 36, wherein said schema defines at least one base property that defines all other properties utilized by the database management program integrated with the file system.

42. (Previously presented) The method of claim 36, wherein said schema defines at least one base relationship type that defines all other relationships utilized by the database management program integrated with the file system.

43. (Previously presented) The method of claim 42, further comprising:
storing, by the operating system, said at least one additional object in said database management program integrated with the file system, wherein said object includes a containment relationship defined by said schema that controls the life-time of another object that is the target of the relationship.

44. (Previously presented) The method of claim 43 further comprising:
storing, by the operating system, said at least one additional object in said database management program integrated with the file system, wherein said at least one additional object is derived from said base object type and said at least one additional object includes a relationship to an object folder derived from said base object type, wherein said object folder being the source of the relationship and said object is the target of said relationship.

45. (Previously presented) The method of claim 44, wherein the existence of a containment relationship is indicated by a property field in the source object of the relationship.

46. (Previously presented) The method of claim 44, further comprising:
deleting the object that constitutes the source in a containment relationship and in response to deleting the source, deleting any objects that are the targets of the containment relationship.

47. (Previously presented) The method of claim 43, further comprising:
configuring said target of the containment relationship to be the target of multiple containment relationships.

48. (Previously presented) The method of claim 41, wherein the base schema further defines a second property type that constitutes a base type for categories.

49. (Currently amended) A computer readable storage medium including computer readable instructions, the computer readable storage medium comprising:
instructions for storing, by an operating system that comprises a shell and a kernel, the kernel of the operating system including a database management program and a file system, and the file system is integrated with the database management program ~~a file system integrated with a database management program~~, data for one or more applications, wherein the operating system uses the database management program to generate objects for the data and the file system to store the file streams for the objects, the database management program including a base schema that characterizes each object into one or more object types that allows the operating system to understand and interpret the information in the file system, wherein the base schema defines object, property base, and extension types, wherein an object type is defined by properties of a foundational object type, the property base type being an anchor from which other property types are derived and through which derived property types are interrelated, and the extension type defines which object an extension extends and identification to distinguish one extension from another;
instructions for receiving, by the operating system, at least one request from said one or more applications for specific data;
instructions for identifying, by the database management program integrated with the file system, a specific object corresponding to the specific data; and

instructions for retrieving, by the operating system, the specific object corresponding with the specific data for said one or more applications.

50. (Previously presented) The computer readable storage medium of claim 49, wherein the base schema further defines at least one base item object including at least one base object type property.

51. (Previously presented) The computer readable storage medium of claim 50, further comprising:

instructions for storing, by the operating system, at least one additional object in said database management program integrated with the file system, said object being derived from said base object type.

52. (Previously presented) The computer readable storage medium of claim 51, further comprising:

instructions for storing said at least one additional object in said database management program integrated with the file system, wherein said at least one additional object extends from said base object type.

53. (Previously presented) The computer readable storage medium of claim 50, wherein said base object type comprises a property that uniquely identifies said object to said database management program integrated with the file system.

54. (Previously presented) The computer readable storage medium of claim 49, wherein said schema defines at least one base property that defines all other properties utilized by the database management program integrated with the file system.

55. (Previously presented) The computer readable storage medium of claim 49, wherein said schema defines at least one base relationship type that defines all other relationships utilized by the database management program integrated with the file system.

56. (Previously presented) The computer readable storage medium of claim 55 further comprising:

instructions for storing, by the operating system, said at least one additional object in said database management program integrated with the file system, wherein said object includes a containment relationship defined by said schema that controls the life-time of another object that is the target of the relationship.

57. (Previously presented) The computer readable storage medium of claim 56 further comprising:

instructions for storing, by the operating system, said at least one additional object in said database management program integrated with the file system, wherein said at least one additional object is derived from said base object type and said at least one additional object includes a relationship to an object folder derived from said base object type, wherein said object folder is the source of the relationship and said object being the target of said relationship.

58. (Previously presented) The computer readable storage medium of claim 57, wherein the existence of a containment relationship is indicated by a property field in the source of the relationship.

59. (Previously presented) The computer readable storage medium of claim 57, further comprising:

instructions for deleting the object that constitutes the source in a containment and in response to deleting the source, instructions for deleting any objects that are the targets of the containment relationship.

60. (Previously presented) The computer readable storage medium of claim 56, further comprising:

instructions for configuring said target of the containment relationship to be the target of multiple containment relationships.

61. (Currently amended) A system for storing data in a data storage management system comprising:

hardware including a hard drive, wherein the hard drive includes executable code for an operating system, the operating system comprising a shell and a kernel, the kernel of the operating system including a database management program and a file system, and the file system is integrated with the database management program ~~a file system integrated with a database management program~~, the operating system configured to store data for one or more applications that are configured to execute in user space of the operating system, wherein the operating system is configured to use the database management program to generate objects for the data and use the file system to store the file streams for the objects, the database management program including a base schema that characterizes each object into one or more object types that allows the operating system to understand and interpret the information in the file system, wherein the base schema defines object, property base, and extension types, wherein an object type is defined by properties of a foundational object type, the property base type being an anchor from which other property types are derived and through which derived property types are interrelated, and the extension type defines which object an extension extends and identification to distinguish one extension from another;

the operating system further configured to receive system calls from one or more user space applications for specific data;

the operating system further configured to direct the database management program integrated with the file system to identify a specific object corresponding to the specific data; and

the operating system further configured to retrieve the specific object corresponding to the specific data for said one or more user space applications.

62. (Previously presented) The system of claim 61, wherein the base schema further defines at least one base object type including at least one base object type property.

63. (Previously presented) The system of claim 62, further comprising:
the operating system further configured to store at least one additional object in said database management program integrated with the file system, said object being derived from said base object type.

64. (Previously presented) The system of claim 63, further comprising:
the operating system further configured to store said at least one additional object in said database management program integrated with the file system, wherein said at least one additional object extends from said base object type.

65. (Previously presented) The system of claim 62, wherein said base object type comprises a property that uniquely identifies said object to said database management program integrated with the file system.

66. (Previously presented) The system of claim 61, wherein said schema defines at least one base property that defines all other properties utilized by the database management program integrated with the file system.

67. (Previously presented) The system of claim 61, wherein said schema defines at least one base relationship type that defines all other relationships utilized by the database management program integrated with the file system.

68. (Previously presented) The system of claim 67, further comprising:
the operating system further configured to store said at least one additional object in said database management program integrated with the file system, wherein said object includes a containment relationship defined by said schema that controls the life-time of another object that is the target of the relationship.

69. (Previously presented) The system of claim 68, further comprising:
the operating system further configured to store said at least one additional object in said database management program integrated with the file system, wherein said at least one additional object is derived from said base object type and said at least one additional object includes a relationship to an object folder derived from said base object type, wherein said object folder being the source of the relationship and said object is the target of said relationship

70. (Previously presented) The system of claim 69, wherein the existence of a containment relationship is indicated by a property field in the source of the relationship.